Attachment 3

Spec 10598-502

<u>Valve-Ball 8 inch, Manual</u>: 1 each required as specified below

Ref. Device GN-V201-S

1 Design:

A. Size: 8" ANSI 16.5 class 1500# RTJ flanged ends, to match sch 160 pipe

B Gaseous Nitrogen -65° F to 120° F

C. Design Pressure: 2600 psi

D. Valve shall be designed, manufactured, and tested in accordance with the ANSI B31.3-2002 Chemical Plant and Petroleum Refinery Piping. ASME B 16.10 Face to Face and End to End Dimensions of Valves

E. Valve leakage: Shall not exceed ANSI/FCI 70-2-1976 Class VI

F. Cv: 1400Min

G. Features: bolted construction, double barrier stem seals, vent plugs, which allow the valve body cavities to be completely vented with the valve in the closed position under pressure Trapped or blow-out proof stem, Bi-directional Flow

2. Materials

A. Body = ASTM A351 CF8M Stainless Steel

B. Ball Material = ASTM A182 F6a 410 or 13/8 Stainless Steel

C. Integral Seat Ring Material = ASTM A351 CF8M

D. Upstream Seat = ASTM A182 F316 Stainless Steel w/ QPQ

E. Stem Material = ASTM A182 F316 Stainless Steel

3. Valve Actuator

A. Valve shall be delivered with a manual gear operator and

stainless steel brackets attached.

B. Actuator shall be sized such that a single person can turn the hand wheel (without the aid of levers, “cheater bars”, etc.) with the valve under any pressure load. Maximum torque required to turn the hand wheel shall not exceed 20 ft-lbs.

C. Actuator hand wheel shall be 18” diameter.

D. Valve must be manually lockable.

4. Valve documentation:

A. Detailed parts list showing components and materials of construction.

B. Drawing of valve showing overall dimensions and connection sizes.

C. Operation instructions detailing how to trouble shoot, test, and maintain the valve.

5. Warranty: Guarantee for a period one year from date of shipment to be free from defective materials and workmanship